

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) In a wireless communications system, a location determining system comprising:

a first GPS receiver in a fixed location relative to base station, exact location coordinates of said first GPS receiver being fixed and predetermined;

a local error determination module to determine a local error difference between a raw GPS location determined by said first GPS receiver and said predetermined exact location coordinates;

a second GPS receiver in a mobile device;

a combiner to combine said local error difference with a raw GPS location signal determined by said mobile device to produce an error corrected GPS location signal provide a location accurate to within a few meters; and

a transmitter for transmitting said combined value error corrected GPS location signal from said mobile device during a telephone call.

2. (canceled)

3. (canceled)

4. (canceled)

5. (previously presented) In a wireless communications system, a location determining system according to claim 1, wherein:

said first GPS receiver and said second GPS receiver operate in a GLONASS system.

6. (previously presented) In a wireless communications system, a location determining system according to claim 1, further comprising:

a database containing at least one geological correction with respect to said determination of said local error difference.

7. (previously presented) In a wireless communications system, a location determining system according to claim 1, wherein said mobile device comprises:

a cellular telephone handset.

8. (previously presented) In a wireless communications system, a location determining system according to claim 1, wherein said local error difference comprises:

a longitude difference; and
a latitude difference.

9. (previously presented) In a wireless communications system, a location determining system according to claim 8, wherein said local error difference further comprises:

an altitude difference.

10. (currently amended) A method of improving an accuracy of a GPS location in a wireless handset, comprising:

receiving location information from a navigational satellite system to determine a mobile GPS location in said wireless handset;

determining a local GPS error difference based on a difference between a raw GPS location determined by a fixed GPS receiver, and known exact location coordinates of said fixed GPS receiver;

transmitting wirelessly said local GPS error difference from a base station to said wireless handset;

combining at said wireless handset a raw GPS location determined by said mobile GPS location and said local GPS error difference to generate an error corrected GPS location signal ~~highly accurate location information~~ to within a few meters; and

transmitting said error corrected GPS location signal ~~highly accurate location information~~ from said wireless handset during a telephone call.

11. (previously presented) The method of improving an accuracy of a GPS location in a wireless handset according to claim 10, further comprising:

transmitting said highly accurate location information from said wireless handset to a called party during an emergency telephone call.

12. (previously presented) The method of improving an accuracy of GPS location in a wireless handset according to claim 11, wherein:

said emergency telephone call is an E-911 telephone call.

13. (canceled)

14. (canceled)

15. (currently amended) Apparatus for improving an accuracy of a GPS location in a wireless handset, comprising:

means for receiving location information from a navigational satellite system to determine a mobile GPS location in said wireless handset;

means for determining a local GPS error difference based on a difference between a raw GPS location determined by a fixed GPS receiver, and known exact location coordinates of said fixed GPS receiver;

means for transmitting wirelessly said local GPS error difference from a base station to said wireless handset; and

means for combining at said wireless handset a raw GPS location determined by said mobile GPS location and said local GPS error difference to generate an error corrected GPS location signal ~~highly accurate location information~~ to within a few meters; and

means for transmitting said error corrected GPS location signal ~~highly accurate location information~~ from said wireless handset during a telephone call.

16. (previously presented) The apparatus for improving an accuracy of a GPS location in a wireless handset according to claim 15, further comprising:

means for transmitting said highly accurate location information from said wireless handset to a called party during an emergency telephone call.

17. (previously presented) The apparatus for improving an accuracy of a GPS location in a wireless handset according to claim 16, wherein:

said emergency telephone call is an E-911 telephone call.

18. (canceled)

19. (canceled)

20. (currently amended) A method of increasing accuracy of a navigational satellite system in a mobile wireless communications device, comprising:

receiving using cellular telephone functionality of said mobile wireless communications device a local error difference;

determining a raw GPS location of said mobile wireless communications device using a GPS system in said wireless communications device;

combining said local error difference with said determined raw GPS location of said mobile wireless communications device to produce an error corrected GPS location signal provide a location accurate to within a few meters; and

transmitting said accurate location error corrected GPS location signal from said mobile wireless communication device during a telephone call.

21. (currently amended) The method of increasing accuracy of a navigational satellite system in a mobile wireless communications device according to claim 20, wherein said local error difference comprises:

a longitude correction; and

a latitude correction.

22. (currently amended) The method of increasing accuracy of a navigational satellite system in a mobile wireless communications device according to claim 21, wherein said local error difference further comprises:

an altitude correction.

23. (currently amended) A mobile wireless device, comprising:
a satellite positioning system receiver;
a wireless communications front end; and
a combiner module adapted to combine a local error difference with
a raw GPS location signal determined by said mobile wireless device to produce
an error corrected GPS location signal provide a location accurate to within a few
meters, and to output during a telephone call said error corrected GPS location
signal from said mobile wireless device a final GPS location, said local error
difference being determined external to said mobile wireless device by a fixed
GPS receiver and wirelessly transmitted to said mobile wireless device.

24. (currently amended) The mobile wireless device according to
claim 23, wherein:

 said local error difference includes longitude and latitude
information.

25. (currently amended) The mobile wireless device according to
claim 23, wherein:

 said satellite positioning system receiver is a GPS receiver.

26. (currently amended) The mobile wireless device according to
claim 23, wherein:

 said wireless communications front end is a cellular telephone.